

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number  
**WO 2005/026387 A1**

(51) International Patent Classification<sup>7</sup>: **C12Q 1/68**,  
C12N 15/10, C12P 1/00, C07B 61/00

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:  
PCT/DK2004/000630

(22) International Filing Date:  
17 September 2004 (17.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PA 2003 01356 18 September 2003 (18.09.2003) DK  
60/504,748 22 September 2003 (22.09.2003) US  
PA 2003 01485 8 October 2003 (08.10.2003) DK  
60/509,268 8 October 2003 (08.10.2003) US

(71) Applicant (for all designated States except US): **NUEVO-LUTION A/S** [DK/DK]; Rønnegade 8, 5., DK-2100 Copenhagen (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **THISTED**, Thomas [DK/DK]; Fjordskrænten 14, DK-3600 Frederikssund (DK). **LUNDORF**, Mikkel, Dybro [DK/DK]; Viborggade 13, st. tv., DK-2100 København (DK). **RASMUSSEN**, Torben, Ravn [DK/DK]; Skovvej 13, DK-2750 Ballerup (DK). **FRESKGÅRD**, Per-Ola [SE/SE]; Örtungsgatan 40, S-603 79 Norrköping (SE).

(74) Agent: **HØIBERG A/S**; St. Kongensgade 59A, DK 1264 Copenhagen K (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD FOR OBTAINING STRUCTURAL INFORMATION CONCERNING AN ENCODED MOLECULE AND METHOD FOR SELECTING COMPOUNDS

(57) Abstract: In one aspect, the present invention relates to a method for obtaining structural information about an encoded molecule. The encoded molecule may be produced by a reaction of a plurality of chemical entities and may be capable of being connected to an identifier oligonucleotide containing codons informative of the identity of the chemical entities which have participated in the formation of the encoded molecule. In a certain embodiment, primers are designed complementary to the codons appearing on the identifier oligonucleotide, and the presence, absence or relative abundance of a codon is evaluated by mixing a primer with the identifier oligonucleotide in the presence of a polymerase and substrate (deoxy)ribonucleotide triphosphates measuring the extension reaction. In another aspect, the invention provides a method for selecting compounds which binds to a target. More specifically, the invention relates to a method in which a target associated with an oligonucleotide initially is mixed with a library of complexes, each complex comprising a display molecule and an oligonucleotide identifying said display molecule. Next, due an increased proximity, the target oligonucleotide is coupled to the identifier oligonucleotide of complexes having a display molecule with affinity towards the target. In a final stage the coupled nucleotides are analysed to deduce at least the identity of the display molecule.

WO 2005/026387 A1